



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**



Joint Center for Robotics (JCR)

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# TARDEC JCR Robotics



*"White Hat" Organization -  
Understand the needs of the user  
and create partnerships with  
Academia, Industry and OGA*

## JCR



## Intelligent Ground Systems

**Projects & Cells**

CAST



USMC



RVCA



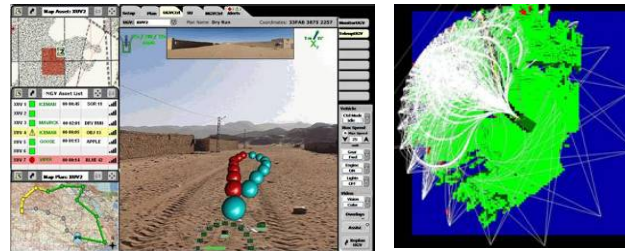
*Future  
Capability  
Cells*

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## Safe Operations and 360° SA



## Tactical behaviors



## Platform Mobility

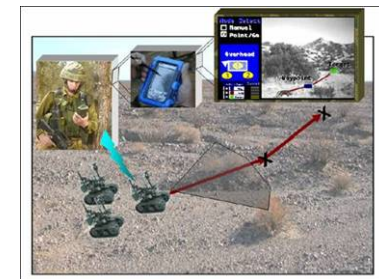


## UGV – Soldier Interfaces

## High-Speed Tele-operation



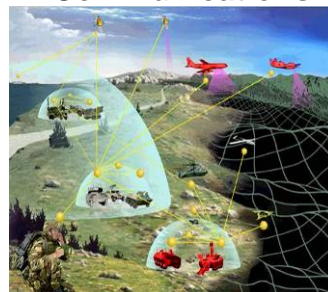
## Autonomous Control



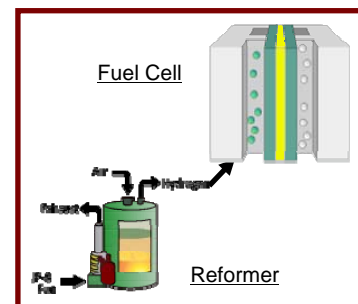
## Arm and Manipulator Articulation



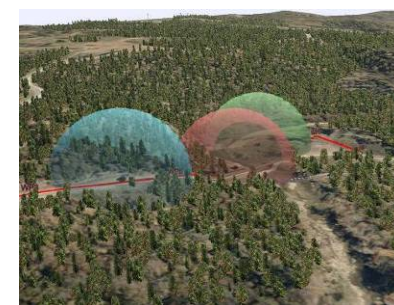
## Communications



## Power Management



## Non-LOS SA



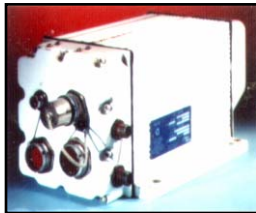




# Manned And Unmanned Vehicle (MAUV) SIL



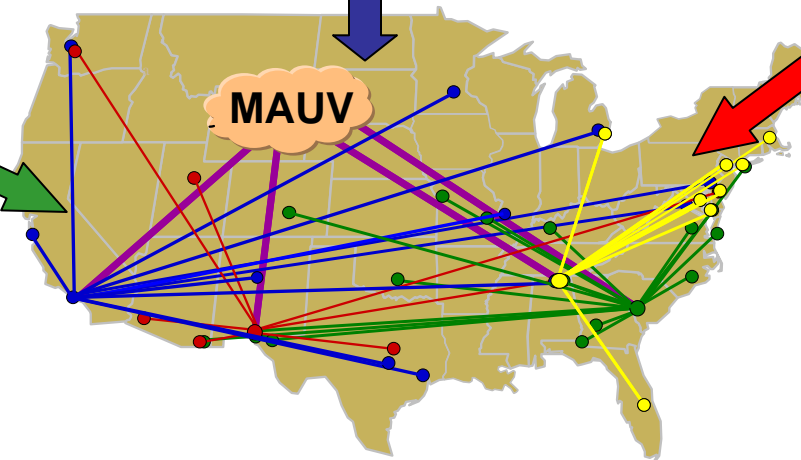
Live



Virtual

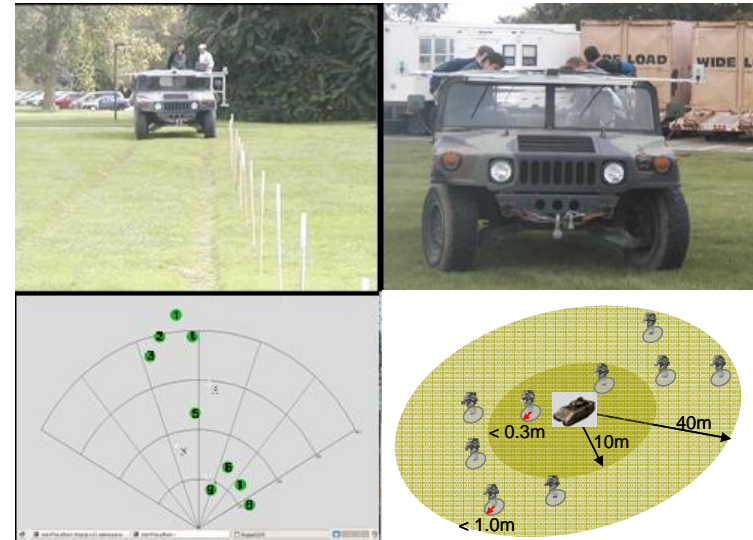


Constructive

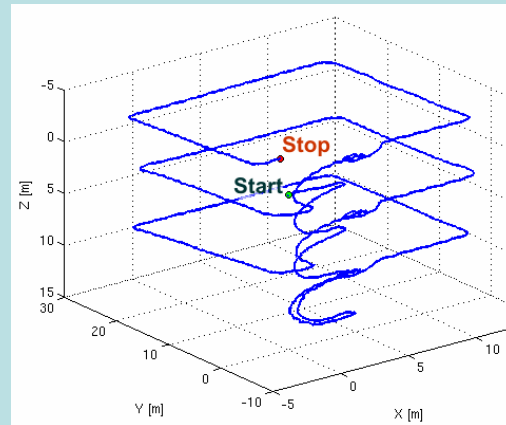


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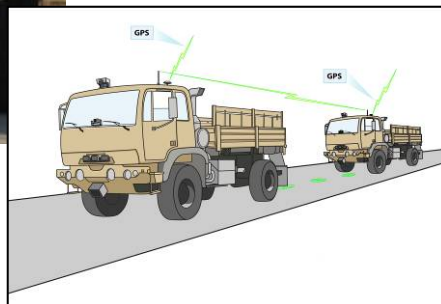
## Oakland University



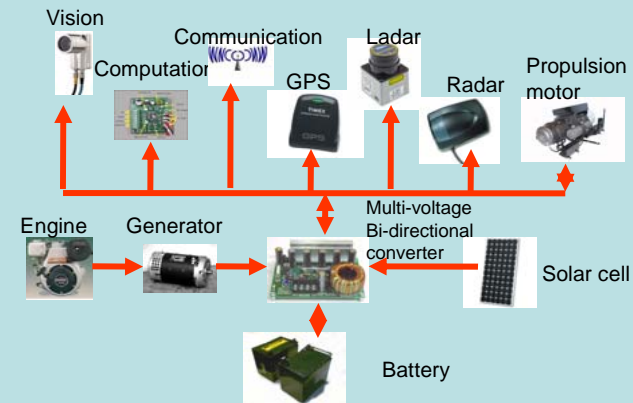
## University of Michigan



## Auburn University



## Lawrence Technological University



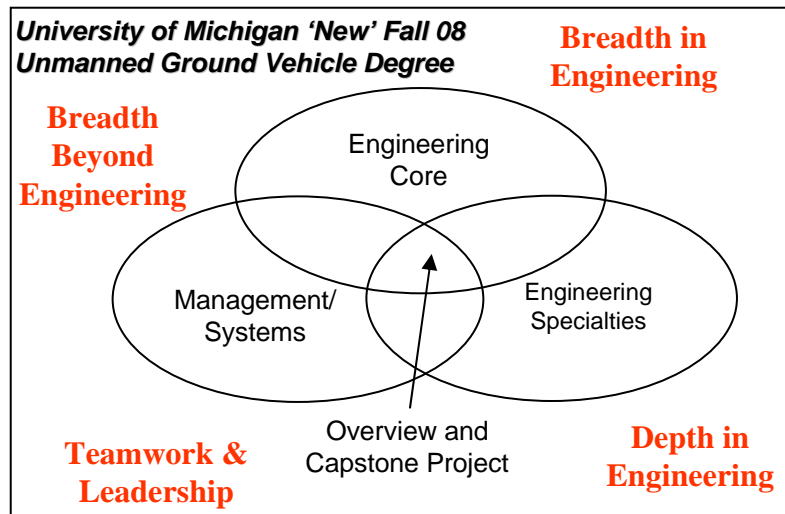
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## Relevant academic projects that align university expertise with UGV needs

12-24 month efforts emphasizing immediate needs (**short term**)

2-3 year efforts with specific drop out points of technology (**long term**)

On-site personnel helping in development of “Capability Cells”



## From Research to the Soldier

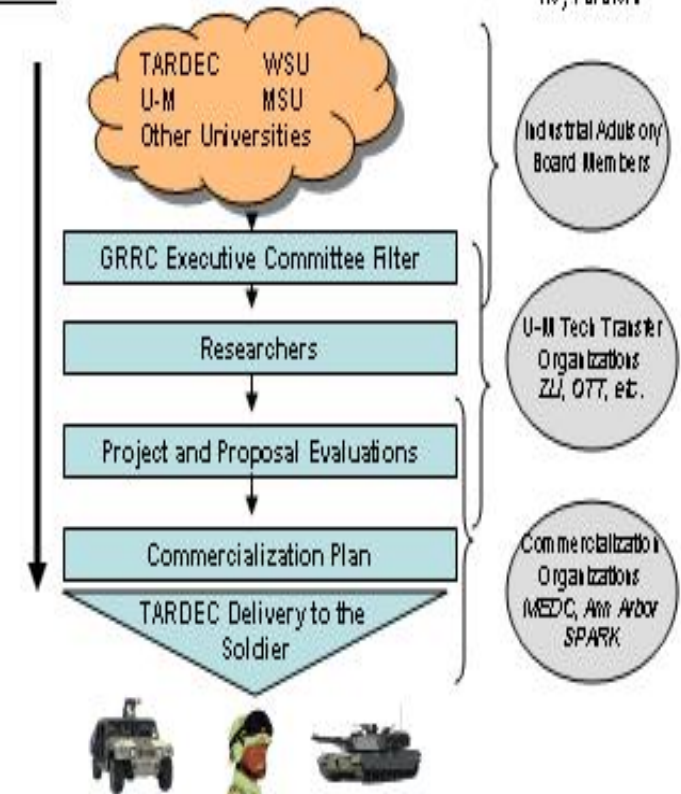
The University of Michigan, other participating universities, companies, and organizations will work within a tech transfer ecosystem to focus research on technologies which demonstrate a clear path to the soldier

### The Research Continuum

Under the TARDEC umbrella, The GRRC will direct research projects and partnerships that:

1. Focus on TARDEC priorities
2. Meet stringent requirements for a focus on the soldier
3. Maintain educational research standards
4. Can deliver tangible results (prototypes, demonstration units, etc)

### Basic Science



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